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Nord Stream 2 – Germany's Dilemma

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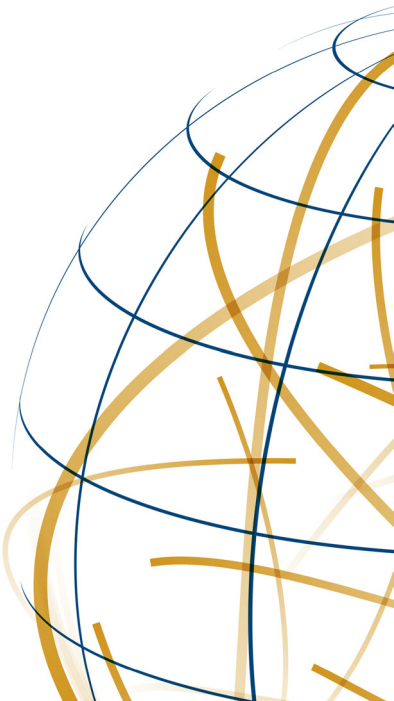
The Nord Stream 2 project presents the German government with the dilemma of choosing between energy and foreign policy interests. Geopolitical arguments often prevail in the political discourse. Yet, a weighing of priorities requires a look at the energy policy context, too. When it comes to balancing interests, there are no easy or "cheap" answers. With a focus on the energy context, it has to be emphasized that a cooperative approach toward energy transformation promises the greatest dividend for a balance of interests, but it presupposes a minimum consensus within the European Union (EU), along with the United States (US), Ukraine, and Russia.

By mid-April 2021, there were still nearly 130 km missing from the Nord Stream 2 pipeline (100 km in Denmark and 30 km in Germany), which stretches from Russia to Germany through the Baltic Sea and is built in two strings of 1,230 km each. US sanctions had halted construction work for more than a year starting in December 2019. As a result of the sanctions, the continued construction, insurance, and certification of the pipeline is now a Russian matter. The package of US sanctions (Countering America's Adversaries Through Sanctions Act [CAATSA], the Protecting Europe's Energy Security Act [PEESA], and the Protecting Europe's Energy Security Clarification Act [PEESCA]) has led to the withdrawal of many European companies. The US sanctions are designed to stop construction. This has brought the situation between Moscow and Washington to a head — a highly charged situation that threatens to end with at least one losing face, forcing the German government to take a political stance.

Foreign Policy Changes

Nord Stream 2 was launched by Gazprom and five European companies in 2015, one year after the annexation of Crimea. In its dealings with the project, the German government took a fallback position early on, relying on existing German law and an economic-technical position, and therefore it classified the expansion of Nord Stream as a commercial project. Nord Stream 2 strengthens the industrial location and the German gas market. In doing so, the German government followed the paradigm of separating trade and politics and sees economic interdependence not as a problem for its own security, but as a basis for balancing interests.

The "compartmentalization" propagated by Germany, i.e., framing the issue as a



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purely economic question, was shared neither by the EU Commission nor by many other EU member states, which assessed the issue differently in the context of national (energy) security and the creation of the Energy Union. These (geo)political dimensions (SWP Research Paper 3/2017) were not given enough consideration by the German government. Berlin resisted a transfer of competences to Brussels for a long time, thereby missing the chance to hand over the controversial topic of Nord Stream 2 to Brussels. Then, in April 2019, the EU's internal market rules were extended to pipelines entering the Union from third countries. This amendment to the Gas Directive transforms highly political issues into administrative action. Although this means that the issues at hand are less likely to be politicized, it also limits the scope of political action available to member states. As the landfall state, it is now up to Germany — in coordination with the EU — to regulate the section of the pipeline through German territorial waters. However, it quickly became apparent that the EU member states had only reached a consensus on the wording of the text, but not on the substance.

Much has changed in the environment since the project was initiated: The five European companies initially withdrew from the investment under pressure from the Polish antitrust authorities and instead pledged financial investments of up to €950 million each. Transparency is an obvious casualty of political pressure.

More importantly, German-Russian relations have deteriorated recently due to the Navalny case, the aggravated situation in eastern Ukraine, and Russia's disinformation campaign against Germany. Thus, this pipeline deal no longer functions as an element for easing tensions — not only because of the repercussions on Ukraine. Instead, as political science argues, energy and foreign relations often reinforce each other in their tendency toward cooperation or conflict. This is precisely why Berlin hopes that the construction of Nord Stream 2 keeps costs high on the further deterioration of relations. Indeed, all this raises the issue of a continued downward spiral in energy relations, where both sides are asymmetrically but mutually vulnerable. Ultimately, dealing with trade has also become a geopolitical issue in a world characterized by strategic rivalries and systemic competition, in which trade and exchange have become political currency and supply chains are subject to normatively underpinned loyalty or antagonism.

Since mid-2015, Berlin's relationship with Washington has not been unaffected by trends and changes of course in the US: Although Berlin, or rather Brussels, continued to impose sanctions against Russia in coordination with the Obama administration, this changed fundamentally during Trump's presidency. Sanctions against Russia (and other energy-rich states) gained their own momentum, driven in part by domestic politics in reaction to Russia's interference in the US elections in 2016, but also by then-President Trump himself as an element of the trade conflict and dispute over defense spending in NATO, and also as an expression of US energy dominance. Although the thrust of unilateral sanctions is clear (to stop the project), the range of motives is broad and the actual goal of the sanctions — to achieve a change in behavior of the target — has been lost from the focus. The secondary effects and externalized costs of these unilateral sanctions for Germany and the EU were accepted as collateral damage, while the US itself continued to import oil from Russia in order to be able to sanction Venezuela and Iran (SWP Comment 6/2019, SWP-Studie 28/2019). After Joe Biden took office on January 20, 2021, a small window for compromise around Nord Stream 2 opened, but it seemed to quickly close due to congressional pressure. Secretary of State Antony Blinken then said the project was "a bad idea" and contrary to EU interests — as well as US security interests — during his inaugural visit to Brussels on March 24. The basic tenor of the Biden administration is more cooperative, but also more normative: It is about restoring the transatlantic relation-

ship and a shared attitude toward authoritarian regimes. Beyond the short-term twists and turns, a realignment with Washington remains no easy matter because, although interests coincide in the systemic competition with China, Europe's exposure is disproportionately higher in the geo-economic disruptions, as well as in the energy trade. The shock of the confrontation with President Trump endures, as does the realization that the US remains a deeply divided country and that its energy wealth sets it apart from the EU in terms of energy policy.

Germany is in a predicament: Russia severely undermines the security situation in Europe, and US sanctions make the pipeline a matter of national sovereignty. Opposition in the EU to the pipeline masks the fact that Washington is also undermining Brussels' powerful instrument of regulation; broader questions concerning the strategic energy capacity to act with and vis-à-vis the US also arise for the EU (SWP Comment 7/2021). The August 2020 demarche to Washington by 24 EU member states gave voice to this concern. Thus, political positions have hardened since 2015. In the following, this Comment will take a closer look at the energy context, which has equally changed since then.

Energy Security

The two additional lines of Nord Stream 2 do not pose a threat to European energy security, nor are they indispensable for the security of gas supply. Since the project is contextualized geopolitically in a hybrid threat scenario for Europe and even the US, it is worth taking a broader view of the energy context, looking first at geography, geology, infrastructure capacities, and supply volumes, and second at the gas consumption pattern.

On a strictly economic basis, Nord Stream 2 doubles the transport capacity through the Baltic Sea by 55 billion cubic-meters (bcm) and connects the newly developed deposits on the Yamal Peninsula with the major gas markets in Europe via a route that is approximately 1,000 km shorter, more modern, and more efficient than the one through Ukraine.

Gas production in the United Kingdom (UK), Denmark, the Netherlands, and Germany has fallen by more than half between 2009 and 2019, to 76.2 billion cubic meters (bcm). The large Dutch gas field in Groningen will cease production altogether in 2022. Northwest Europe is Gazprom's most important sales market, with the UK and Germany being the biggest customers with around 57 bcm (2019). Production in the EU has fallen faster and to a greater extent than was assumed in the 2017 Prognos study, which formed the basis for the Nord Stream 2 plan approval procedure. The study only assumes a reduction of 41 bcm by 2025.

The Prognos study forecasted imports of 376 bcm from the EU28, plus Switzerland and western Ukraine, for 2020. In reality, total net imports of around 407 bcm were already significantly higher in 2019. Accordingly, about 170 bcm were purchased from Russia.

Geology also plays a role at the Russian end of the pipelines, as the old gas fields of the Nadym-Pur-Taz region have passed their peak production levels. In contrast, production levels on the Yamal Peninsula are growing. Thus, Gazprom has to manage the gas fields (and their depletion) with a view to exports and consumption. The main export sources as well as routes are shifting primarily to the north, or from eastern Siberia to China, if the "Power of Siberia" — with an annual capacity of 38 bcm — is included in the picture. The huge capacities at the Yamal Peninsula are also a reason why China and Russia are negotiating the "Power of Siberia 2," which has a capacity of 50 bcm from western Siberia.

It is, of course, in theory correct that the EU, Ukraine, and the Western Balkans and Turkey could also be supplied via the existing pipeline network. The old gas pipeline system through Ukraine has a nominal capacity of 146 bcm per annum, the Yamal-Europe pipeline through Poland and Belarus 33 billion m^3, and Nord Stream 55 bcm of gas from Russia. In addition, there

are pipelines to Turkey: TurkStream with 31.5 bcm, Blue Stream with 16 bcm, and a small pipeline to Finland. Even without the additional 55 bcm of Nord Stream 2, there are no pipeline bottlenecks. This is, however, a very simplistic view.

The connecting pipelines from Greifswald into Germany are in operation and function as an integral part of the gas network. These pipelines are regulated and have been part of the German Network Development Plan as well as a European-wide market survey (in the case of the European Gas Pipeline Link [EUGAL]). Yet, if Nord Stream 2 does not come on stream, these investments are partly stranded costs that may put a burden on gas consumers. The Ostsee-Pipeline-Anbindungsleitung (OPAL) has been reduced to only half of its pipeline capacity following a ruling by the General Court of the EU in September 2019 that was issued after a complaint by Poland. In addition, the European Gas Pipeline Link (EUGAL) has been available since April 2021 and offers a capacity of 55 bcm. The connecting Gazela pipeline can transport around 30 bcm via the Czech Republic to Waidhaus, the old entry point to Germany through which the volumes were imported via Ukraine.

However, the expansion of transport capacities does not automatically mean that more gas would be purchased from Gazprom. The decisive factors for gas purchases are, in fact, Gazprom's own sales strategy as well as existing long-term contracts with their take-or-pay clauses, i.e., the volumes that the buyers must pay for in any case and will therefore also purchase. In addition, "nominations" are made according to price signals, i.e., orders are placed where the cheapest gas can be obtained. This is why the shares of liquefied natural gas (LNG) deliveries to Europe have fluctuated in recent years. Estimates suggest that, until at least 2030, Gazprom has long-term contract supply commitments of around 120 billion m^3, and has thus secured a significant market share in Europe, which it must also serve.

Climate Policy Considerations

The political pressure on Nord Stream 2 is even higher because of the fact that it is a fossil fuel infrastructure project. The pipeline is considered to be a bet by the energy companies against European climate protection. And indeed, in order to achieve climate neutrality by 2050, the consumption of natural gas will have to drop massively. However, scenarios aimed at achieving the climate target currently diverge widely from trend scenarios. The above-mentioned consumption data also shows that there has been no trend reversal in gas consumption thus far.

A dilemma arises between the speed of emission reductions and the depth of decarbonization when arguing about the use of natural gas as a bridge. Natural gas replaces coal in the industry and in power generation. Because Germany will phase out nuclear power in 2022 and coal more rapidly than 2038, it is very likely that the consumption of natural gas will increase over the next decade. Thus, there is a concrete question about the security of supply in the transition period. In the public debate, however, the predominant focus on *annual* import volumes and possible transport routes is misleading. For this reason, fluctuations in the seasonal consumption of gas will increase massively beyond 2030, with monthly gas consumption in Germany already being more than three times higher in the winter months than in individual summer months. In the winter, cold spells coincide with so-called *Dunkelflaute*. An assessment that takes an accurate view at points in time suggests the need for capacities and flexibilities in the infrastructure. In the past, this function was fulfilled by storage facilities and gas fields in the EU. The latter will soon be missing. During the cold spells of 2019 and 2021, pipelines from Russia were running at full capacity. The cold spell of February 2021 also showed that LNG followed a price logic that makes Europe the "last resort" of LNG. This means nothing other than that much higher prices would have to be paid for LNG during a

cold snap to divert volumes to Europe: On February 19, the LNG spot price in East Asia was more than 80 percent higher than the gas price in Europe. At the same time, LNG exports from the US had also plunged by two-thirds in February. Notwithstanding, LNG from the US, Russia, or Qatar has become an important part of the EU and Europe's gas mix, but for ensuring supply, the price — as well as time factor regarding when tankers arrive — plays a major role.

In this respect, more climate protection also creates new opportunities but also new challenges for security of supply. The energy transformation means a phase characterized by high uncertainties and volatilities for the transition period, which will in any case put supply relations and the gas transmission system under great stress.

Stopping Nord Stream 2 for climate policy reasons would mean a sensitive intervention in the gas value chain. Physically, a source of flexibility would be missing, with no (see above) direct impact on supply volumes, and no corresponding successful savings on the demand side. Sometimes, the argument is put forward, that it is to prevent the price-dampening effect that the pipeline has on German gas customers. Yet, if fossil energy is to become more expensive, there are other approaches that have less impact on the security of supply.

If natural gas is to become successively more expensive, then creating a physical shortage is the wrong step; a price for CO_2 and methane emissions could be set instead. It is correct that methane emissions must be monitored along the entire supply chain and not just used as an argument for or against a modern pipeline through the Baltic Sea. Dealing with methane emissions and decarbonizing the gas supply chain is therefore a very important starting point for international cooperation with the Biden administration and other partners.

Integrity of Ukraine

At the end of 2019, an agreement was reached with Russia on gas transport through Ukraine. What led to this — whether it was US sanctions or negotiating and mediating skills — is open to debate. However, a breakthrough was achieved on gas transport: a new contractual relationship between Russia and Ukraine that complies with EU rules and lays a stable and binding contractual foundation until the end of 2024. This guarantees Ukraine transit revenues of at least $7.2 billion.

Accordingly, Gazprom booked firm transport capacities of 65 bcm in 2020, followed by firm capacities of 40 bcm in the 2021—2024 period. The contract is on daily volumes, which does not give seasonal flexibility. These ship-or-pay volumes must be paid for independently of the actual service. The tariff is significantly higher than on the competing Yamal-Europe or Nord Stream 1 routes, as Ukraine's system is designed for higher volumes. If Gazprom wants to export more natural gas through Ukraine, it would have to book larger transport volumes at even higher prices in the short term.

2020 has made it clear that Ukraine is now increasingly integrated into the Central European gas market. The following integration steps have been taken by Ukraine in recent years: physical and virtual gas imports from Slovakia, Poland, and Hungary, more price convergence of imported gas with European hubs; implementation of EU network codes; use of its gas storage facilities for Eastern Europe due to attractive commercial conditions; and maintaining gas transport in competition with other routes. Ukraine no longer buys gas volumes directly from Russia for its own consumption, but from the EU. These steps actually lead the way ahead and make it possible in the first place to participate in the EU's strategic goal — a climate-neutral continent by 2050.

So if more far-reaching compromise solutions are sought now, the main issue discussed is how to guarantee the transport of natural gas from Russia beyond December 31, 2024. Considerations today about extending the agreement make sense, but they are difficult to implement in detail. First, there are good reasons against reopen-

ing the agreement. Even a potential extension is difficult, as the issue of gas transport tariffs for the next regulatory period of 2025—2029 shows. Tariffs are unlikely to be set by the National Regulatory Authority of Ukraine (NEURC) until 2024. Expecting Gazprom to reserve capacity already today without knowing the tariffs is hard to imagine. On the other hand, as suggested in a study by IHS Markit, it would be quite conceivable to set aggregate annual tariffs, e.g., which would then be paid in advance by Gazprom into a trust fund managed by the EU for a longer period. This would provide Ukraine with more planning certainty for decommissioning pipes or converting parts of the system for the transport of hydrogen. The old system had a capacity of 146 billion m^3, which was already only partially utilized in 2019 with 89.6 bcm of annual transport volume.

In 2020, Gazprom shipped 55.8 bcm of gas, less than the capacity booked (65 billion m^3). ICIS also reports that Gazprom booked only slightly more than the daily requirement of 109.6 million cubic meters in the first four months of 2021 and no additional capacities in May 2021.

In the future, transported volumes through Ukraine will remain flat or decrease because of changing flow patterns in South-East Europe. First, TurkStream, which extends from Russia to the European side of Turkey, was completed, and since January 2021 volumes through Bulgaria to Serbia have been delivered through the second leg with a capacity of 6 bcm and later 8.5 bcm. Moreover, Gazprom will reroute gas delivered to Hungary and Romania (7.5 bcm in 2020) from Ukraine through TurkStream. Second, the Trans Adriatic Pipeline (TAP) started its deliveries of Azerbaijani gas through Greece and Albania to Italy in December 2020. It will later also supply one-third of Bulgaria's gas needs when the Greece-Bulgaria interconnector is completed. In addition, there are LNG terminals in Revithoussa, Greece, Krk, Croatia, and from 2022, Alexandroupolis, Greece, as well as similar facilities in Turkey. As a result, gas supplies in southeastern Europe have diversified, and purchases of Russian natural gas through Ukraine are decreasing, not only as a result of the construction of TurkStream and the consequent rerouting of Russian gas, but also due to competition from LNG, especially from the US. All this together means that Gazprom will be guided by long-term contracts with Slovakia, Moldova, and partly Romania, which it primarily serves via the Ukraine corridor. The past months display that Gazprom is obviously not really willing to book extra and expensive capacities via Ukraine. The Ukrainian corridor is less competitive vis-à-vis the other transport routes into Europe. If this remains the case after 2024, even if Nord Stream 2 does not come on line, there will be fewer additional bookings beyond the 40 bcm per year.

Prospects for Eastern Europe

Ukraine is important to the configuration of gas flows in the region. It stopped buying Russian gas directly in 2015 following Russia's annexation of Crimea and support for armed separatism in eastern Ukraine. It began to meet its gas import needs through physical and backhaul imports from Central Europe, primarily from Slovakia, but also from Hungary and Poland. With this step, Ukraine became part of the Eastern-Central European gas market, which, as described above, is already largely integrated into the EU internal market.

Geostrategic considerations about the gas region between the Baltic Sea, the Adriatic Sea, and the Black Sea should acknowledge the big success story of EU gas policy: The construction of the interconnectors, the application of EU regulation and, most recently, the implementation of the antitrust proceedings against Gazprom have brought more competition to the markets and more price convergence with the gas hubs of northwest Europe. Gazprom's dominant market position has ended. Gas flows are changing with an increased role of the Czech Republic and Bulgaria, compared to Slovakia and Romania in the past.

It is not only Nord Stream 2 itself, but also the (energy) political reactions to it that cement a certain division in the gas market. In the Three Seas Initiative, the Eastern and Central European countries are not only pursuing a course of North-South interconnection among themselves, but also primarily of integration into the international gas market in order to reduce dependence on Russia's Gazprom (SWP-Aktuell 16/2021). Although this is an important step for the energy sovereignty of the countries, the cohesion of the EU gas market must also remain in view. It will also be necessary to observe whether and how gas flows will change from October 1, 2021, with the newly established unified German market area (Trading Hub Europe, THE) and its new tariffs.

The Polish gas market remains largely sealed off from the northwestern European market by trade barriers — a consequence of Polish energy policy, which focuses on the physical substitution of Russian gas volumes by 2022 and has blocked more interconnectivity with Germany. Due to these barriers and special regulations, the Polish market is largely monopolized. This dividing line is politically sought by Warsaw and driven by energy economic interests of its major incumbent.

Poland's gas consumers pay a higher gas price for this policy, which is sold politically as a contribution to genuine diversification. The expansion of gas infrastructure was financed with EU funds. At this point, a circle closes with regard to the difficult balance between climate policy and security of supply. Russia has a strong position in the EU market. At the same time, there is flexibility as well as options to replace a (partial) shortfall in volumes in the short and medium terms. However, if the energy transition does not succeed faster across Europe, the high level of dependence on Russia will remain, which in turn could trigger more LNG infrastructure investments for diversification.

In the future, European import demand will have to be met mainly by pipeline gas from Russia and by LNG mainly from the US, Russia (from Novatek and Gazprom), and Qatar, as domestic, Algerian, and also Norwegian production levels decline or level off. It is primarily the LNG supply from Qatar that will increase significantly on the world market after 2025, from 110 to 152 bcm per year. Both LNG and Russian pipeline gas have a balancing role — on the European as well as the global market.

This sets the EU apart from the US: It has a vital interest in gas market cohesion and not in a "*cordon sanitaire*." Moreover, Russia remains not only a neighbor, but also a major supplier of energy and raw materials, on which an energy transformation will have to rely and which has to made part of a climate-neutral Europe by 2050. Zero-sum games in the gas sector then really lead to dead ends. This is because Europe's energy supply presupposes a *modus vivendi* with Moscow. The application of EU regulations and market mechanisms has proved to be a promising and effective pathway for an ever better-functioning and competitive gas market. A market approach creates options for necessary cooperation on natural gas and the energy transition: It would be possible to negotiate gas supplies from Central Asia through Ukraine and a "gas release" in the form of, e.g., the auctioning of Russian gas volumes via Gazprom's electronic trading platform at various entry points. The extent to which these options remain possible — if Nord Stream 2 is stopped for external and geopolitical considerations — is difficult to assess. However, the shift to geopolitics would weaken market mechanisms and close this route (for now).

Options for Action

Germany's dilemma stems from political circumstances and the challenge of balancing economic and foreign policy interests. Depending on the political choice, two and a half options arise in the context of energy policy from the current situation: 1) participation in the sanctions against Russia to stop construction; 2) active flanking of the project and search for a compromise. A pas-

sive wait-and-see approach is not really a political option, as US pressure alone forces a position.

Regarding the first option, stopping the construction has already proven to not be easy for the US, since many activities are now being carried out by Russian companies. Thus, sanctions aimed at stopping the pipe-laying activities would result in a confrontational situation. Moreover, sanctions would need to be executed jointly in the EU (and in coordination with the US) without violating the norm of non-discrimination. There is also the concern of damage claims. This approach would require a clear rationale for imposing the sanctions and a consensus in the EU. Sanctions are linked to conditions for a change in behavior, which must be achievable, otherwise sanctions become an end in themselves. Even if opponents call the situation around the project a race and an endgame, such a step would be a big bang, but it would be more of an opening for a next round (of escalation) with no discernible benefits. Who benefits from a ruin in the Baltic Sea? If new sanctions are seen as the political way forward, then it would be more effective if the EU and the US were in lockstep against Russian oil supplies. Here, the Kremlin is more vulnerable, but also the costs between the EU and the US would be more equally distributed.

Regarding the second option, the building blocks for finding a compromise are actually obvious: further integrating Ukraine into the EU internal energy market, not only through synchronizing Ukraine's electricity grid with the EU's electricity grid, but also through the extension of gas transport or its decarbonization. Moreover, the region between the Baltic Sea, the Adriatic Sea, and the Black Sea is predestined for the production of green gases and hydrogen. In theory, this is particularly true for Ukraine, which could benefit from its geographical position: The country has the potential to produce green hydrogen, but also blue hydrogen (for Europe) from (Russian) natural gas and store the CO_2 captured in the process. Ukraine can take a key role in "clean gases," hydrogen, and CO_2 capture and storage. Yet, this depends on a stable and reliable regulatory and investment framework in the country. Furthermore, Germany could become even more involved in the Three Seas Initiative. It would also be conceivable to extend gas transport through Ukraine.

One of the central ideas from Washington, however — the emergency brake and snapback mechanism — is difficult to implement for at least two reasons. First, there is currently no foreseen regulatory mechanism that can be used. Second, the "quid pro quo" would not only cost the EU dearly in literal terms, but it would also — depending on its duration — be accompanied by massive restrictions on the security of supply.

However, there is still leeway regulatory- and time-wise after the completion of the pipeline that can be used for political negotiations. There are still stopping points on the way to the commissioning of the pipeline: the acceptance of the pipeline and the implementation of the Gas Directive. Gazprom and the Kremlin will then have to disclose which rules they want to play by. At what point in time what volumes of whose natural gas will then actually flow through the pipeline and who operates it are potentially also questions of compromise.

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